

# **EPA Superfund Explanation of Significant Differences:**

**SHARON STEEL CORP. (MIDVALE TAILINGS)**

**EPA ID: UTD980951388**

**OU 02**

**MIDVALE, UT**

**06/23/1994**

## EXPLANATION OF SIGNIFICANT DIFFERENCES

### SHARON STEEL (OU2) SUPERFUND SITE - MIDVALE, UTAH

June 1994

#### INTRODUCTION

This document explains the significant differences between the remedy selected in the Record of Decision (ROD), signed by the U.S. Environmental Protection Agency (EPA) in 1990, and the implemented remedy at the Sharon Steel Operable Unit 2 (OU2) Superfund Site in Midvale, Utah (Site). The Utah Department of Environmental Quality (UDEQ) is the lead agency for OU2 and is conducting the Remedial Action under a Cooperative Agreement, with the EPA assisting as the support agency.

Under Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund), as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), 42 U.S.C. § 9617(c), EPA is required to publish an Explanation of Significant Differences (ESD) when significant, but not fundamental changes are proposed to the previously selected site remedy. The National Contingency Plan (NCP) sets forth the criteria for issuing an ESD and requires that an ESD be published if a remedial action is taken which differs significantly in either scope, performance, or cost from the remedy selected in the ROD for the site.

EPA regional toxicologists conducted a review of the past scientific rationale for the action level of 200 parts per million (ppm) for lead-contaminated garden soils presented in the Baseline Risk Assessment and have determined that residential properties with garden soils having lead concentrations between 200 ppm and 500 ppm lead do not present significantly different health risks when compared to garden soils having lead concentrations of 500 ppm. Therefore, garden soils outside the 500 ppm lead/70 ppm arsenic boundary will not be remediated to below 200 ppm lead and will not be subject to institutional controls.

The Site is currently in the remedial action phase of the Superfund cleanup process. Based on new information obtained after the signing of the ROD, the EPA and UDEQ have limited the scope and cost of remedial action by reducing the volume of lead-contaminated garden soils to be excavated and/or subject to institutional controls to only those possessing lead concentrations greater than 500 parts per million (ppm) and/or arsenic concentrations greater than 70 ppm. This change in the remedial action has resulted in the need for this ESD.

This ESD provides a brief history of the Site, describes the original remedy selected in the ROD, and explains how the modified remedy differs from the original. It also discusses the modified remedy's compliance with all legal requirements and provides details on how the reader may obtain more information on the modified remedy.

This document also presents a brief overview of information relating to the Site. This ESD and its supporting documentation will be incorporated into the Administrative Record for the Site.

The Administrative Record file is available for public review at the following locations:

1. Ruth Vine Tyler Library  
315 Wood St., Midvale, UT 84047  
Hours:  
Monday-Thursday: 9:00 am-9:00 pm  
Friday & Saturday: 9:00 am-5:30 pm
2. Utah Department of Environmental Quality  
Division of Environmental Response and Remediation  
168 North 1950 West, 1st Floor  
Salt Lake City, UT 84116  
Hours:  
Monday-Friday: 8:00 am-5:00 pm

3. EPA Superfund Records Center  
999 18th Street, Fifth Floor  
Denver, CO 80202  
Hours:  
Monday-Friday: 8:00 am-5:00 pm

#### **SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS AND THE SELECTED REMEDY**

The Sharon Steel (OU2) Superfund Site is located in Midvale, Utah, encompassing part of the City of Midvale and surrounding areas. The Site is bounded on the west by the Sharon Steel (OU1) Site, on the north by 7200 South Street, on the east by a line one or two blocks east of Interstate Highway 15, and on the south by newer residential and commercial areas. The exact boundaries of the Site have been defined during Remedial Design as properties where lead concentrations exceed 500 ppm.

The land south and west of Midvale is used primarily for agricultural and commercial activities while land to the north and east is mostly urban. Approximately 44,000 people live within a 2 mile radius of the Site.

Three main topographic and geologic features exist at the Sharon Steel Site: the Jordan River Floodplain (draining the entire valley area), terraces from the Great Salt Lake/Lake Bonneville System, and artifacts from the mining industry. Residential areas near the old Sharon Steel mill site but in the OU2 area lie on the terraces outside of the Jordan River Floodplain. Most public drinking water supply wells within 3 miles of the Site use the deep aquifer to service 440,000 people, though various shallow and deep aquifers are used for domestic, agricultural and industrial applications.

The Site includes a former milling operation originally owned and operated by the U.S. Smelting, Refining and Milling Company (now known as U.V. Industries, Inc.), from 1906 to 1971 Sharon Steel purchased the OU1 mill site in 1979. In 1982, the Utah Department of Health was notified that local citizens were gathering wind-blown tailings for use in sandboxes and gardens. An investigation in 1988 revealed that wind-blown tailings, originating primarily from uncovered deposits at the OU1 mill site, had contaminated 571 acres of residential property. These investigations found soil concentrations which exceeded the action levels for lead and arsenic (500 ppm and 70 ppm, respectively) over roughly 142 acres of the approximately 571-acre residential contaminated area.

The Sharon Steel Site, including both the mill site (OU1) and off-site soils contaminated-area (OU2), was proposed for the Superfund National Priorities List (NPL) in 1984 and became final on August 28, 1990. As a result of extensive public comment, EPA decided to divide the Sharon Steel Site into two operable units (OUs), with OU1 referring to ground water, the mill site, and its tailings, and OU2 referring to the residential soils contaminated by wind-blown tailings. The Feasibility Study and Proposed Plan for OU2 were completed and issued on June 6, 1990, and the ROD signed on September 24, 1990.

The selected remedy presented in the ROD for OU2 is the first of a two-step remedy, addressing the most immediate threat to public health. This first phase consists of excavating contaminated soils from the residential areas and temporarily placing these soils at the mill site (OU1). A final remedy for these soils, along with the existing mill site soils, will be addressed by a future ROD for the mill site (OU1). Excavation is triggered in residential areas by soils containing lead and arsenic concentrations exceeding 500 ppm and 70 ppm, respectively. Clean soils will be placed in the excavated areas, graded to the original ground surface contour, and properties relandscaped. Following outdoor cleanup, homes will be cleaned to remove household dust potentially contaminated with lead and arsenic.

Institutional controls will be implemented to provide special provisions for future construction when removing or replacing existing sidewalks, driveways, foundations, etc. which may have contaminated soils beneath them. In addition, the original selected remedy called for removal of existing garden soils with lead concentrations greater than 200 ppm and arsenic concentrations greater than 70 ppm. Institutional controls would also have been used to regulate the installation of new gardens.

## **DESCRIPTION OF SIGNIFICANT DIFFERENCE**

The selected remedy for OU2, as described in section 9, component D of the ROD, requires the removal of existing garden soils down to 18 inches for soils with concentrations of lead greater than 200 ppm and arsenic greater than 70 ppm. The remedy also requires the employment of institutional controls to regulate the installation of new gardens in these areas.

The UDEQ, in conjunction with the Bureau of Reclamation, conducted soil sampling in Midvale to determine which properties would require soil removal and replacement based on the action levels of 500 ppm lead and/or 70 ppm arsenic and thus, the boundaries for complete soil removal activities in OU2. Based on the original action levels for garden soil presented in the ROD, many properties outside the 500 ppm lead and/or 70 ppm arsenic boundary would be subject to soil excavation and institutional controls for garden areas only.

After issuance of the ROD, the EPA regional toxicologists conducted a review of the past scientific rationale for the action level of 200 ppm lead for lead-contaminated garden soils presented in the Baseline Risk Assessment (BRA). This review determined that, based on current toxicological knowledge and conditions at the Sharon Steel (OU2) Site, residential properties with garden soils having lead concentrations between 200 ppm and 500 ppm do not present significantly different health risks when compared to garden soils having lead concentrations of 500 ppm.

Based on soil sampling results from properties in Midvale, the cleanup levels required by the ROD for OU2, and the review of BRA studies which set these levels for OU2, EPA and UDEQ have decided not to include properties with lead levels in gardens of less than 500 ppm within the OU2 boundaries for remedial action. The EPA and UDEQ do not intend to implement any soil removal or garden restrictions for areas outside of the 500 ppm boundary as established during Remedial Design. The EPA and UDEQ have therefore decided to delete component D, along with its associated references, from the selected remedy presented in section 9 of the ROD.

Deletion of component D will reduce the scope and cost of the selected remedy without affecting that remedy's original goal of removing soils which pose significant health risks. All soils, including gardens, which have lead concentrations exceeding 500 ppm, and/or arsenic concentrations exceeding 70 ppm will be remediated in accordance with the ROD. By reducing the scope and cost of the remedial action this modification is considered a significant, but non-fundamental change to the original remedy and affords essentially the same level of public health protection from excessive exposure to and effects of lead in soil.

## **STATUTORY DETERMINATIONS**

Based on new information provided concerning the lack of significant health risks posed by garden soils having lead concentrations between 200 ppm and 500 ppm and the change made to the selected remedy regarding removal of these soils and institutional controls placed on new gardens in these areas, the EPA and UDEQ believe that the revised remedy remains protective of human health. In addition, the EPA and UDEQ believe that the revised remedy complies with state and Federal requirements that are applicable or relevant and appropriate to this remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

## **NOTICE OF AVAILABILITY**

Notice is hereby made that this ESD and its supporting documentation is being made available through the Administrative Record file. The Administrative Record for this ESD is available for review at the previously listed locations.

**EXPLANATION OF SIGNIFICANT DIFFERENCES**

**RECORD OF DECISION, (ROD) - SHARON STEEL (OU2) SITE**

**DECLARATIONS**

Considering the new information that has been developed and the changes that have been made to the selected remedy chosen in the original ROD of September 24, 1990, EPA and UDEQ believe that the remedy remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate for this remedial action, and is cost effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

---

William P. Yellowtail, Regional Administrator  
U.S. Environmental Protection Agency, Region VIII

---

Date